

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of producing a phase shift mask blank wherein the method includes at least a step of forming two or more phase shift films having different compositions respectively on a substrate, and in the step, each of the phase shift film films having different compositions respectively is formed by the sputtering method by simultaneously discharging at least one or more silicon target and one or more target selected from the group consisting of a metal silicide, a metal silicide oxide, a metal silicide nitride, a metal silicide oxide nitride, a metal silicide oxide carbide, a metal silicide nitride carbide, and a metal silicide oxide nitride carbide;

further, each phase shift film is formed by continuously discharging targets used for forming any one of the layers of the phase shift films without shutdown even when the other layers of the phase shift films are formed, and a composition ratio of metal and silicon in the phase shift film is changed by adjusting discharge powers applied to each target.

2. (Canceled)

3. (Original) The method of producing a phase shift mask blank according to Claim 1 wherein a metal component of the target is molybdenum.

4. (Canceled)

5. (Original) The method of producing a phase shift mask blank according to Claim 1 wherein when the phase shift film is formed by the sputtering method, a gas containing oxygen, nitrogen, or carbon as a constituent element is used as a sputtering gas.

6. (Canceled)

7. (Original) The method of producing a phase shift mask blank according to Claim 3 wherein when the phase shift film is formed by the sputtering method, a gas

containing one or more elements selected from oxygen, nitrogen and carbon as constituent elements is used as a sputtering gas.

8. (Previously Presented) A method of producing a phase shift mask wherein a pattern is formed on the phase shift film of the phase shift mask blank produced by the production method according to any one of claims 1, 3, 5 and 7.

9. (Currently Amended) A phase shift mask blank wherein at least two or more phase shift films having different compositions respectively are formed on a substrate, each of the phase shift mask film-films having different compositions respectively contains at least metal and silicon as constituent elements, and each phase shift film is formed by a sputtering method by simultaneously discharging at least one or more silicon target and one or more target selected from the group consisting of a metal silicide, a metal silicide oxide, a metal silicide nitride, a metal silicide oxide nitride, a metal silicide oxide carbide, a metal silicide nitride carbide, and a metal silicide oxide nitride carbide;

further, each phase shift film is formed by continuously discharging targets used for forming any one of the layers of the phase shift films without shutdown even when the other layers of the phase shift films are formed, and a composition ratio of metal and silicon in the phase shift film is changed by adjusting discharge powers applied to each target.

10. (Original) The phase shift mask blank according to Claim 9 wherein the phase shift film comprises a metal silicide, a metal silicide oxide, a metal silicide nitride, a metal silicide oxide nitride, a metal silicide oxide carbide, a metal silicide nitride carbide, or a metal silicide oxide nitride carbide.

11. (Original) The phase shift mask blank according to Claim 9 wherein a metal component of the phase shift film is molybdenum.

12. (Original) The phase shift mask blank according to Claim 10 wherein a metal component of the phase shift film is molybdenum.

13. (Original) The phase shift mask blank according to Claim 9 wherein a center value of a distribution of phase differences in the phase shift film to wavelength of light used in exposure is 180 ± 10 degrees, and a center value of a distribution of transmittances in the phase shift film is 3-40%.

14. (Original) The phase shift mask blank according to Claim 10 wherein a center value of a distribution of phase differences in the phase shift film to wavelength of light used in exposure is 180 ± 10 degrees, and a center value of a distribution of transmittances in the phase shift film is 3-40%.

15. (Original) The phase shift mask blank according to Claim 11 wherein a center value of a distribution of phase differences in the phase shift film to wavelength of light used in exposure is 180 ± 10 degrees, and a center value of a distribution of transmittances in the phase shift film is 3-40%.

16. (Original) The phase shift mask blank according to Claim 12 wherein a center value of a distribution of phase differences in the phase shift film to wavelength of light used in exposure is 180 ± 10 degrees, and a center value of a distribution of transmittances in the phase shift film is 3-40%.

17. (Original) The phase shift mask blank according to Claim 9 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

18. (Original) The phase shift mask blank according to Claim 10 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

19. (Original) The phase shift mask blank according to Claim 11 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

20. (Original) The phase shift mask blank according to Claim 12 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

21. (Original) The phase shift mask blank according to Claim 13 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

22. (Original) The phase shift mask blank according to Claim 14 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

23. (Original) The phase shift mask blank according to Claim 15 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

24. (Original) The phase shift mask blank according to Claim 16 wherein a distribution of phase differences in the phase shift film to wavelength of light used in exposure is within $\pm 1.5^\circ$, and a distribution of transmittances in the phase shift film is within $\pm 0.15\%$.

25. (Original) A phase shift mask wherein a pattern is formed on the phase shift film of the phase shift mask blank according to any one of Claims 9-24.

26. (Original) A phase shift mask blank wherein the phase shift mask blank comprises at least a multilayer phase shift film composed of two or more layers of phase shift films on a substrate, the multilayer phase shift film comprises a metal silicide compound, and a metal content in an outermost layer of the phase shift film in the multilayer phase shift film is 1/20-1/3 (molar ratio) of a metal content of a phase shift film which contains the most metal among the phase shift films in the multilayer phase shift film.

27. (Original) The phase shift mask blank according to Claim 26 wherein the metal silicide compound comprises a metal silicide and a compound of oxygen and/or nitrogen.

28. (Original) The phase shift mask blank according to Claim 26 wherein the metal silicide compound comprises a compound of a molybdenum silicide.

29. (Original) The phase shift mask blank according to Claim 27 wherein the metal silicide compound comprises a compound of a molybdenum silicide.

30. (Original) The phase shift mask blank according to Claim 26 wherein a Cr base light shielding film and/or a Cr base antireflection film is formed on the multilayer phase shift film.

31. (Original) The phase shift mask blank according to Claim 27 wherein a Cr base light shielding film and/or a Cr base antireflection film is formed on the multilayer phase shift film.

32. (Original) The phase shift mask blank according to Claim 28 wherein a Cr base light shielding film and/or a Cr base antireflection film is formed on the multilayer phase shift film.

33. (Original) The phase shift mask blank according to Claim 29 wherein a Cr base light shielding film and/or a Cr base antireflection film is formed on the multilayer phase shift film.

34. (Original) A phase shift mask wherein a pattern is formed on the multilayer phase shift film of the phase shift mask blank according to Claims 26-33.

35-55. (Canceled)